REQUIREMENTS FOR THE DECAY IN STORAGE METHOD OF WASTE DISPOSAL

This checklist serves to identify information to be submitted for authorization to dispose of radioactive waste via decay in storage.

1. Specify isotopes to be considered for the decay in storage method of disposal. Nuclides with half lives of greater than 90 days will not be considered.

2. Submit a description and diagram of the area where the waste will be held in storage. Include provisions for shielding, security, and labeling.

3. Provide expected dose rates in adjacent uncontrolled areas (see 17 CCR, Section 30268 for limits).

4. Commit to conducting surveys of adjacent areas at specified intervals as part of routine area survey procedures.

5. Provide procedures used to ensure that the waste has decayed to background levels (not statistically different from natural background levels). Include the items listed below:

   a. Describe the inventory control system used to track individual bags, boxes, or other containers. This should include isotope, activity, and date sealed and placed in storage.

   b. Storage time: A minimum of ten (10) half lives is usually sufficient for microcurie quantities.

   c. Survey procedures using appropriate instrumentation in a low background area. Surveys should include all surfaces of each container to be released for all high energy beta, X-ray, and gamma emitters. For S-35, the highest activity container within any batch to be released should be opened and the contents carefully surveyed to determine if any measurable activity remains. If no readings above background are detected, the whole batch may be released. The suggested instrumentation is listed below:

Type of Emitter	Type of Instrument
Beta	G-M with <2 mg/cm2 window (large area probe preferred)
X-ray or Gamma	NaI crystal (thin or thick depending on energy)

6. Submit segregation procedures to prevent mixing of isotopes and containers of the same age group.

7. Commit to removal or obliteration of all labels or similar markings, which indicate the presence of radioactive materials. This can be done as the waste is placed in containers, with only the container labels to be removed prior to the release.

8. Commit to keeping records of all disposals made in this manner along with all surveys made relative to storage and release of decayed waste as nonradioactive waste.